SEQUENCE LISTING

AUG 0 7 2002

TECH CENTER 1600/2900

hujath Salceda, Susana Sun, Yongming Cafferkey, Robert

<223> n=a, c, g or t

<221> misc_feature

<223> n=a, c, g or t

 $(154\overline{1})...(1541)$

<220>

<222>

<120> A NOVEL METHOD OF DIAGNOSING, MONITORING, AND STAGING PROSTATE CANCER <130> DEX-0105 <140> 09/700,700 <141> 2000-11-20 <150> PCT/US99/10548 1999-05-12 <151> <150> US 60/086,265 <151> 1998-05-21 <160> <170> PatentIn version 3.1 <210> 1 1936 <211> <212> DNA <213> Homo sapiens <220> <221> misc feature <222> (106)..(106) <223> n=a, c, g or t <220> <221> misc_feature <222> (455)..(455) <223> n=a, c, g or t <220> <221> misc_feature <222> (459)..(459) <223> n=a, c, g or t <220> <221> misc_feature (468)..(468) <222>

<220>
<221> misc_feature
<222> (1908)..(1908)
<223> n=a, c, g or t

<400> aatggtatgc caacttaagt atttacaggg tggcccaaat agaacaagat gcactcgctg 60 tgattttaag acaagetgta taaacagaac tecaetgeaa gagggnggge egggeeagga 120 gaateteege ttgteeaaga caggggeeta aggagggtet ceacactget getagggget 180 gttgcatttt tttattagta gaaagtggaa aggcctcttc tcaacttttt tcccttgggc 240 tggagaattt agaatcagaa gtttcctgga gttttcaggc tatcatatat actgtatcct 300 gaaaggcaac ataattette etteeeteet tttaaaattt tgtgtteett tttgeageaa 360 ttactcacta aagggettea ttttagteea gatttttagt etggetgeae etaacttatg 420 cctcgcttat ttagcccgag atctggtctt ttttntgtnt tttttttntt tccgtctccc 480 caaagettta tetgtettga etttttaaaa aagtttgggg geagattetg aattgggeta 540 aaagacatgc attittaaaa ctaggcaact tettattiet tieetttaaa aatacatage 600 attaaatccc aaatcctatt taaagacctg acagcttgag aaggtcacta ctgcatttat 660 aggacettet ggtggttetg etgttaegtt tgaagtetga caateettga gaatetttge 720 atgcagagga ggtaagaggt attggatttt cacagaggaa gaacacagcg cagaatgaag 780 ggccaggctt actgaggctg tccagtggag ggctcatggg tgggacatgg aaaagaaggc 840 agcctaggcc ctggggagcc cagtccactg agcaagcaag ggactgagtg agccttttgc 900 aggaaaaggc taagaaaaag gaaaaccatt ctaaaacaca acaagaaact gtccaaatgc 960 tttgggaact gtgtttattg cctataatgg gtccccaaaa tgggtaacct agacttcaga 1020 gagaatgagc agagagcaaa ggagaaatct ggctgtcctt ccattttcat tctgttatct 1080 caggtgagct ggtagagggg agacattaga aaaaaatgaa acaacaaaac aattactaat 1140 gaggtacgct gaggcctggg agtctcttga ctccactact taattccgtt tagtgagaaa 1200 cctttcaatt ttcttttatt agaagggcca gcttactgtt ggtggcaaaa ttgccaacat 1260 aagttaatag aaagttggcc aatttcaccc cattttctgt ggtttgggct ccacattgca 1320 atgttcaatg ccacgtgctg ctgacaccga ccggagtact agccagcaca aaaggcaggg 1380 tageetgaat tgetttetge tetttaeatt tettttaaaa taageattta gtgeteagte 1440 cctactgaqt actettete teccetecte tgaatttaat tettteaact tgeaatttge 1500 aaggattaca catttcactg tgatgtatat tgtgttgcag ngaaaagaaa aaagtgtctt 1560 tgtttaaaat tacttggttt gtgaatccat cttgcttttt ccccattgga actagtcatt 1620 aacccatctc tgaactggta gaaaaacatc tgaagagcta gtctatcagc atctgacagg 1680 tgaattggat ggttctcaga accatttcac ccagacagcc tgtttctatc ctgtttaata 1740 aattagtttg ggttctctac atgcataaca aaccctgctc caatctgtca cataaaagtc 1800 tgtgacttga agtttagtca gcaccccac caaactttat ttttctatgt gttttttgca 1860 acatatgagt gttttgaaaa taaagtaccc atgtctttat taaaaaanaa aaaaaagggc 1920 ggccgccgac tagtga 1936 <210> 2 <211> 637 <212> DNA <213> Homo sapiens <400> gtaggggcag acttactgcc ttgaacgaaa gacgatggtc ctcgctcagc ctcactccaa 60 ttatgttcct ctaggtgggg caggtagggg gtccagcttc ctgcttgctg gtggttcagg 120 teatgegtee ageettgtee ettetgacet gggeeetace caeggggaaa tgtteecata 180 gcagaagaat cagccccaca gtgcaggggt gtgttagtgg ggaacgggct ctgggctcct 240 gtgggaacca gggaccccct atcttggtac cggtcattgg atgtatcccc agctcatqcc 300 tgtgtctgtc ttggcccgtg tggtcaccct gtgttcatct ctctcccagc catggcctct 360 caaactgggg ttttcgtctc cctatgaggg ggtcctggta tgtacgcgtt cggtgggccc 420 geggtgcatg teteceggtg cagtgcatge tggggtteee tggggeeetg ggeeeetegt 480 aggatagaca gagcctgtcc taaccttccg gaagtgcatg ctggggaggc cccttgcctg 540 etgacettet gtgeteagga egactaateg gecacatgae caccaetetg teccatggga 600

637

<210> 3

ttcctagaga agtctcacta agagcccagc acactca

<211> 2693

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (586)..(586)

<223> n=a, c, g or t

```
<220>
<221>
      misc_feature
<222>
      (1480)..(1480)
<223> n=a, c, g or t
<220>
<221> misc_feature
<222>
      (1532)..(1532)
<223> n=a, c, g or t
<220>
<221> misc feature
<222>
      (1562)..(1566)
<223> n=a, c, g or t
<220>
<221> misc_feature
<222>
      (1569)..(1569)
<223> n=a, c, g or t
<220>
<221> misc feature
<222>
      (1571)..(1571)
<223> n=a, c, g or t
<220>
<221> misc feature
<222> (1631)..(1631)
<223> n=a, c, g or t
<220>
<221> misc_feature
<222>
      (2266)..(2512)
<223> n=a, c, g or t
<400> 3
gctcctacag ccgcatctgc gttaacatag catccctatg gccactgtct cccttgatcc
                                                                      60
ccacagccat cctaggagaa aggcagaatg tcataatttg ctaaaaggga tgctgaggct
                                                                     120
ctgggaggga aagggacttg cctaaagccc cagggtgaag cagcatctct ggactcccag
                                                                     180
tccagtgatc ttgcccaata ctttgctgct tgcctatacc cctctaactt ggtcaacagc
                                                                     240
acatcacagg gcaagcccaa tccctgcttc atttttatat atgggcgctg gtccacagcc
                                                                     300
ccactctcca gccatttgga aacaaaaaca gatgctattg ttcttcctta gagaacgtgg
                                                                     360
```

ccagtggaga cggcacactg gaaatcagag tgaatgttct tgaaagaggg tcacgggtca 420 480 acaaggccca gccaaaggat gcagtagaac cattttcctt agaaatcttt gggagtgaag 540 taggetteag ceactaceea teeetgeeet tgeggetace actaceeeat tagtttagae agggtcgggc ggggaggggt gtggagaaga aatgagcttg cctgtngccc ccaggctccc 600 totgtoctag otcaggtotg ggtgccatto tttacactog tgtgctcgct cacgcacaca 660 tcacacacct tgctggtcac acagtcacag actcgcctct gctcctgtgg tccagtggcc 720 780 ggacaccccc tgggatggct caaaggagtc aggacttgga agtggggaca tcagggtagc tgaaggaaat ccacacaccc agagcatctc ggagttcaga ctctcagacc tgaagtaggc 840 gccccggga ctgggctagg agttggacgg aatggaggat ggaggacagc gagaagaaag 900 960 gaagagaaat gcaaagtgtg ggcagccgcc aagagtgaaa atagagggaa gtgtcatgca agtgctggac agaaggcggc aggtgggacg agccccacag cccctcctc aaaaacgacc 1020 acctccagga ctcagtgatc cctggggggc aggctctgcc agccctcggc cacacgtggc 1080 teeggeacee atggteecag tgeettggat ggagaeggee agttetggeg geeagatgtg 1140 gtgctctgga atccagtccc atttccttcc tggccacgcc tgttccagcg gcctctttgg 1200 ctgcattcag cccctactta cctggggacc ccggctgggg cacaagagca ccaggggggt 1260 agggcccaaa gggatcaggg gaagcctctg gcctggaggg tatggggcac gcttccccaa 1320 gggcggaccc ggcaggagga agcccaggag ctgggtcctg ccgcccagga gctgggccct 1380 gccacccagg ccgggctagg gacatggcag ggcctgggca tcctgacgct ggacttgggc 1440 1500 gacctgggag gcacagggag gggagagatg ggcggccccn acccagcgca gtgccggcca 1560 caccccaagg cggttgccag agcttaaggc cnggccccag caggagaaca tcccagctcc annnnncene neegeageea gtgeteettg teaageteee eeegteacte eaggtgggag 1620 ccacccggt nagggggtgt gccacttgcc cccagggcac tcctctgggc atcccgggtg 1680 ggggattttg gggccgtggg gggcagtctc tggtacctgt gtgcgtcagg gatgctctgc 1740 acctgcaacc aggtgtcgtc cacgggcggg ggcatgggca tggtgacagt ggtcctgttg 1800 atgtcaccga tgatgctgag cgcctccttc agcgcgtggt gcatgtgcag catctcgtcg 1860 tgctgctgtg cctgctctgc caactcctcc atcagtgtgt tctggttccc acatgagtac 1920 atattggcca gcggctccga gatgatgaac tccggggtct gagagtgggc aaacagggaa 1980 gaaggttggg acctggtgcc tgtgccgccc tggctgcctt gctgggccct tctgggactg 2040 tgcgctggac ttggagcccc ttggagtatg gcttttcaca cgggcttcta taccgcttcg 2100

```
actggaagat ccacctcccc actgcctttt ctcactcaga tggggacacc gaggtccaga
                                          2160
ggaaaagaca cctgtcaaat gtcacagatc tgggagggga cttaagacct atcatgccaa
                                          2220
gaggacacct gtctactcag tttttttttg gtggggggg gggcgnnnnn nnnnnnnnn
                                          2280
2340
2400
2460
2520
agttgatgcc tggatacagg agctctgtgg gtgggagtga gacaaaacac agggtcctga
                                          2580
gctctgggga ccaagcaatg tcctctggtg aaaaaaatcc tggacttgct ggcagaagat
                                          2640
ttgcctctta cttgccatgt gctctgaata catttacctg ccctctggga aaa
                                          2693
```

<211> 292 <212> DNA <213> Homo sapiens <220> <221> misc_feature <222> (284)..(284) <223> n=a, c, g or t

4

<210>

<400> 4
aagaatatga gatttgctta gaaatgaagg actggaagga gcccacagag ttattttta 60
aactatccag taaggcttag agggtttcaa tcagaaatat gtgttagggg aaaaaatgca 120
cttttctat attaaaaaat attatttct tcttttaaat gtaaagcatt cctattgtga 180
agaattgaga aaatacagaa aagtacaaag aaaaacatta cctacaactc caccatccgt 240
gattatcact gttcacattt gtggctcatt tttcagtatk tctnttattt aa 292

<210> 5
<211> 2694
<212> DNA
<213> Homo sapiens
<220>
<221> misc_feature
<222> (52)..(52)
<223> n=a, c, g or t

<220>

```
<221> misc_feature
<222>
       (74)..(74)
<223> n=a, c, g or t
<220>
<221> misc_feature
<222> (76)..(76)
<223> n=a, c, g or t
<220>
<221> misc_feature
<222> (81)..(81)
<223> n=a, c, g or t
<220>
<221> misc_feature
<222> (93)..(93)
<223> n=a, c, g or t
<220>
<221> misc_feature
<222> (98)..(98)
<223> n=a, c, g or t
<220>
<221> misc feature
<222> (123)..(123)
<223> n=a, c, g or t
<220>
<221> misc_feature
<222> (132)..(132)
<223> n=a, c, g or t
<220>
<221> misc_feature
<222> (173)..(173)
<223> n=a, c, g or t
<220>
<221> misc feature
<222> (217)..(217)
<223> n=a, c, g or t
<220>
<221> misc_feature
<222> (257)..(257)
<223> n=a, c, g or t
```

```
<220>
<221> misc_feature
<222> (2539)..(2539)
<223> n=a, c, g or t
```

<400> tactatattg ctcagcattt ctaagtattc tctaagtgct ctttatttat gntttaaaat 60 agetetetta ecengntgeg negaetagaa ganettgntt taggaaacaa tgaaatatat 120 aanttgccag antcaattgg agccctctta catctaaaag atctctggtt ggntggaaat 180 caactgtcag aattacctca ggaaatagga aatctgnaga acctgctgtg tttagatgtc 240 tctgaaaaca ggttggnaag acttcctgaa gaaatcagtg gcctgacttc attaacggat 300 ttagtcattt cccagaactt attagaaacg attccggatg gcattggaaa actaaagaaa 360 ctgtcaatct tgaaggtgga tcagaataga ctcacacagt tgcctgaagc agttggggaa 420 tgtgaaagtc tcactgagtt agttcttaca gaaaatcagc tcctgaccct gcctaaaagc 480 attggaaaac taaagaagtt gagcaacttg aatgcagaca gaaataaatt agtgtcctta 540 ccaaaagaga tcggcgggtg ctgcagcctc actgtgttct gtgtacgtga caacagacta 600 acteggatae etgeagaggt gteacaggea acagaaette atgteetgga tgtggeaggg 660 aacaggttgc tgcatctacc tttatccctg actgccttga agttgaaggc tctgtggcta 720 tetgacaace agteecagee cetgettaca ttecagacag acacagaeta caccacagga 780 gagaagattt taacctgtgt cttacttcct cagctgcctt ctgaacctac ttgtcaagag 840 aatctgcctc gctgtggtgc actggagaac ttggtaaatg atgtctctga tgaagcctgg 900 aacgagcgtg ctgtcaacag agtcagtgcg atccgatttg tggaggatga gaaagatgaa 960 gaagacaatg agacgagaac acttctaagg cgagccactc cacacccagg ggagttaaag 1020 cacatgaaaa agacagtgga gaatttacgg aatgacatga atgctgctaa aggactggac 1080 tcaaacaaaa acgaggtcaa tcatgccatt gaccgagtga ccacttctgt gtagagtttc 1140 acctecaagt tttacetect gtgtetteet etgetgtega gaegtteetg tetgetteee 1200 gggagcctca cgtgctcctt gtcctaacca gcccccgcgc gccatcttcc cgtggagtgt 1260 ggggaagetg etgtetecca ggaagtgeet tacteatece geaaceagte agegeaceag 1320 tggtctcccg gtgtgatttt ttttttttt aatttcagtt gtttgtaata agtagaatac 1380 actactgtaa acatacgacc tttgtttttg tcttatgttg gggtaaagga aagcaggaag 1440 gggaattttt atcctcctcc cttccgtaaa gtgctgggat attttgaatc ccccaagttc 1500 ccttggacct actgatgaga gatagtttta tgtatgggga aaaatggata ctttttaaac 1560 cttttttggc agctcagatg gtgtaaattt taaaattttg tataggtatt tcataacaaa 1620 aatatgtatt tottttttgt tattttatot tgaaaacggt acatatttta gtatttgtgo 1680 agaaaaacaa gtcctaaagt atttgttttt atttgtacca tccacttgtg ccttactgta 1740 teetgtgtea tgteeaatea gttgtaaaca atggeatett tgaacagtgt gatgagaata 1800 ggaatgtggt gttttaaagc agtgttgcat tttaatcagt aatctacctg gtggatttgt 1860 ttttaaccaa aaagatgaat tatcaatgat ttgtaattat atcggttgat tttttttgaa 1920 aagatgaacc aaaggatttg actgctaata ttttattcct tacacttttt ttctgaataa 1980 gtctctcata atgagtgcag tgtcagactg tgcctactct gatggtatgt gccatttgta 2040 aaataaaata gagcagaaaa acacaaaaag agaacactgg ttcagacatt cagtgggcaa 2100 gtaaattatg gactgcaaaa taatgatttt tattcaagaa agctttaaaa gttttatatc 2160 cagatataca accacaataa agcaaaataa cctactatca aaatagaaat gttgctatct 2220 ttataagtgc aatttaattt gtaaatagag tttgaatcaa agtatcacaa aatactgctt 2280 caagatttaa ttttaaatct gctaatttaa gggatattgg gaaaagtttt ggtgttttc 2340 tgttgatttc ttttttgtat gctgtgataa aagagaaatg aaaagtgcca gtcactgtgt 2400 ggtgtctagg aaaatcatat atattttttt ctccaagaaa taaattcatc ctggacattg 2460 gccatacagc tttttaaaat tattactttg tatgttcaag tgatagcagg tagccaaatt 2520 ctttgacagt gtgctctgnt ctgttaaata tctaaattac ccgtcagttg tgagtgacct 2580 cctgtgggac ttgcattcac atggggcaga gcccagaatt gcctttgact ctggctagta 2640 attttgggtt gtggctatct ggccaattgg actccttata aacccgtctt caac 2694

<400> 6

tcatatagta ggaaganaag cacctaggtt tgaggccagg gctggctgct gtcagaacct

60

<210> 6

<211> 1335

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (17)..(17)

<223> n=a, c, g or t

aggecetece etgeettget ceacacetgg teaggggaga gaggggagga aagecaaggg 120 aagggaccta actgaaaaca aacaagctgg gagaagcagg aatctgcgct cgggttccgc 180 agatgcagag gttgaggtgg ctgcgggact ggaagtcatc gggcagaggt ctcacagcag 240 300 ccaaggaacc tggggcccgc tcctccccc tccaggccat gaggattctg cagttaatcc tgcttgctct ggcaacaggg cttgtagggg gagagaccag gatcatcaag gggttcgagt 360 gcaagcetca eteccageee tggcaggeag eeetgttega gaagaegegg etaetetgtg 420 gggcgacgct catcgcccc agatggctcc tgacagcagc ccactgcctc aagccgtggc 480 540 cgctacatag ttcacctggg gcagcacaac ctccagaagg aggagggctg tgagcagacc 600 eggacageca etgagteett ecceacece ggetteaaca acageeteee caacaaagae caccgcaatg acatcatgct ggtgaagatg gcatcgccag tctccatcac ctgggctgtg 660 egacecetea eceteteete aegetgtgte aetgetggea eeagetgeet eattteegge 720 tggggcagca cgtccagccc ccagttacgc ctgcctcaca ccttgcgatg cgccaacatc 780 accatcattg agcaccagaa gtgtgagaac gcctaccccg gcaacatcac agacaccatg 840 gtgtgtgcca gcgtgcagga agggggcaag gactcctgcc agggtgactc cgggggccct 900 ctggtctgta accagtctct tcaaggcatt atctcctggg gccaggatcc gtgtgcgatc 960 accegaaage etggtgteta cacgaaagte tgeaaatatg tggaetggat eeaggagaeg 1020 atgaagaaca attagactgg acccacccac cacagcccat caccctccat ttccacttgg 1080 tgtttggttc ctgttcactc tgttaataag aaaccctaag ccaagaccct ctacgaacat 1140 tetttgggee teetggaeta caggagatge tgteaettaa taateaaeet ggggttegaa 1200 atcagtgaga cctggattca aattctgcct tgaaatattg tgactctggg aatgacaaca 1260 cctggtttgt tctctgttgt atccccagcc ccaaagacag ctcctgccat atatcaagtt 1320 tcaataaata tttct 1335

<210> 7

<211> 1079

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (268)..(268)

<223> n=a, c, g or t

<221> misc_feature <222> (688)..(688) <223> n=a, c, g or t <220>

<221> misc_feature
<222> (700)..(700)
<223> n=a, c, g or t

<400> tttttgaaga atgccctgca aggcatcaac tggaatgtgt ttattaccaa acaagacaga 60 agagaaccag ggcctgactt ggcagtggcc ccaggctgca tgggctcagg taggctcaga 120 ccggccccag gagtgggaga gcccagagaa gagggaaaaa gagtagtggc caggaggggt 180 ctggctggga catgccactc tgggccatca gcttctggat ccactcaaag tggtggctga tattggtgta gacaccgggc cgattggncc gaccacagcc cactccccag ctcacgactc 300 caatctgata ccacagtcca ttcttgttac aggccaaggg tccacctgag tcaccgaagc 360 aggeatectt ceegeettgg geattgeeag cacaaaceat gtetecaaag atgteettge 420 ggaaactgta cttgaggaag aggtggttgc acatagagtt gtttatgatg gcgacctgaa 480 cttcctggag ggtgtgggga gatggcagtg cctcatcctc tttgatgtac ccccagccag 540 teacceagea gtetgteegg tteteaaact caaatgtgga ggeetggaga cagatggget 600 ggatgtgttt agtgtaggtg acaggtgcag acagcttcac caaggcaatg tcatagggtg 660 aattccccag ttagcgaggg ctcagatnga tattcgatan gaagtaacgg gtgtagtagg 720 cctgcaggct ccagaaggat ggcatggaag tcagctggcc aaactggacc atccacccgg 780 agggatcact aaggtcacta taggtttcaa agcagtgege egeegtgagt geeeageggt 840 ggctgagcag gctcactccg catacgtggg aatcccacag gcgcaggctc ccctgccacg 900 gccaacgccc gagttcggcg tcctctccac ccacgatgcg cgacgtgatg acccgtcggc 960 egeatggtee tgataaggge geegeeteet gegaeteegg etteetgagt ceageeegag 1020 ccagcagcag cgccagcagc agcgccccgc gcgcgcccat ggcctcctct cccgcggtg 1079